User Manual

Installation and Operation

LT-84 ListenIR Transmitter/Radiator Combo

LA-141 ListenIR Expansion Radiator

LISTEN TECHNOLOGIES

Table of Contents

Safety Cautions! 2
Recycling Instructions 2
Compliance Information 3
Compliance Notice, FCC and Industry Canada Statements 3
System Overview 4
LT-84 ListenIR Transmitter/Radiator Combo 5
Package Contents 5
LT-84 Rear View Quick Reference 5
LA-141 ListenIR Expansion Radiator 6
Package Contents 6
LA-141 Rear View Quick Reference 6
LT-84 and LA-141 Coverage 7
Designing a System 9
Flexible Mounting Hardware Instructions 10
Mounting Hardware Kit 10
Mounting Provision Thread ¼" x 20 (6mm x 1.0 thread) 10
Wall Surface Mounting Example 11
Ceiling Surface Mounting Example 11
Mounting Two Units with Linking Mount Example 11
Interconnection and Control 12
Connection of the External Power Adaptor 12
Connection of External Audio Sources 13
I/R Frequency Selection/Control 14
ListenIR Expansion Link RJ-45 Connections 15
Indicator Lights 16
Troubleshooting 17
LT-84 Specifications 18
LA-141 Specifications 19
Warranty Information 20
Technical Support Contact 21

Safety Cautions!

CAT-5e Cable Safety:

Do NOT Plug the LT-84 (ListenIR Transmitter/Radiator Combo) CAT-5e cable into anything other than an LA-141 (ListenIR Expansion Radiator). The LT-84 CAT-5e Expansion Output RJ-45 connection is proprietary and is not compatible with Ethernet or any other system. Failure to comply with this caution can damage the LT-84, LA-141 or other equipment and will void the warranty.

Hearing Safety:

The LT-84 is designed to be used with Listen Technologies receivers. These receivers are designed to amplify audio to a high volume level which could potentially cause hearing damage if used improperly. To protect your hearing, make sure the volume is turned down before putting on the ear speaker or headphones, then adjust the volume up to the minimum setting require to hear clearly. Do not allow children or other unauthorized individuals to have access to this product without supervision.

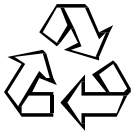
Medical Device Safety:

Before using Listen Technologies receivers with an implantable or other medical device, consult your implantable or other medical device physician or manufacturer. Always make sure you are using this product in accordance with the safety guidelines established by your physician or the implantable device manufacturer.

Recycling Instructions

Recycling:

Help Listen Technologies protect the environment by taking the time to dispose of your equipment properly.



Product Recycling Instructions:

Please do NOT dispose of your Listen Technologies equipment in the household trash. Please take the equipment to an electronics recycling center; OR, return the product to the factory for proper disposal.

Battery Recycling Instructions:

Please do NOT dispose of batteries in the household trash. Please take the batteries to a retail or community collection point for recycling.

Compliance Information

No FCC license or radio approval is required to operate this equipment.

Compliance Notice, FCC and Industry Canada Statements

Compliance Notice

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) These devices may not cause harmful interference, and (2) these devices must accept any interference received, including interference that may cause undesirable operation.

FCC Statement

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

Industry Canada Statement

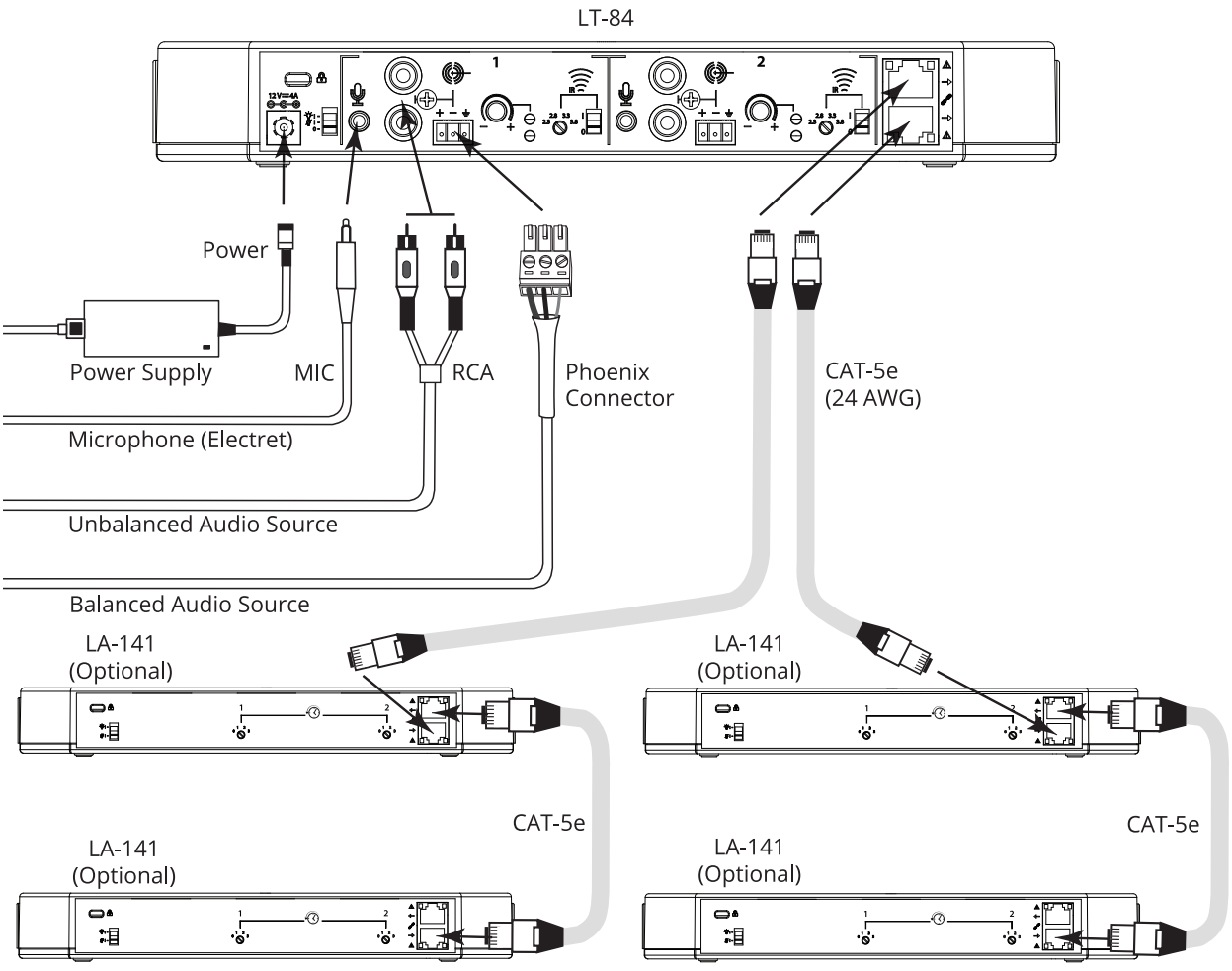
This equipment complies with ICES-003 class B.
CAN ICES-3 (B)/NMB-3(B)

System Overview

The LT-84 is an all-in-one two channel infrared (IR) transmitter and radiator (Transmitter/Radiator Combo) packed into a single mountable enclosure. The LT-84 IR radiator is located behind the IR transparent front panel and provides line-of-sight coverage of 7,500 ft^2 (697 m^2) .

The LT-84 is perfect for high-quality audio applications like assistive listening, audio description or language interpretation in corporate boardrooms, courtrooms, training rooms, classrooms, and theaters. Its flexible audio inputs accept microphone, consumer and line level inputs which are all mixed to the modulated IR transmission. IR receivers then detect the modulated IR transmission and convert the IR signals back into an audio signal and presents it to headphones.

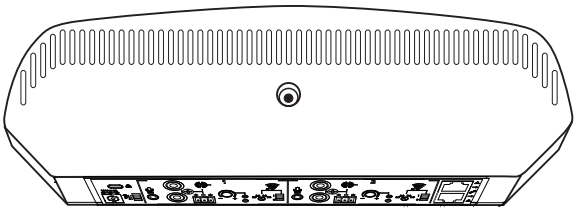
For better line-of-sight coverage or for coverage in larger areas the LT-84 can be combined with up to four (4) LA-141 Listen IR Expansion Radiators. The LA-141s are connected in a daisy chain fashion to the LT-84 via a **24 AWG** unschielded CAT-5e cable. A maximum of two (2) LA-141s can be connected to each expansion link output on the LT-84 with a maximum cable length of 100 ft. (30 m).



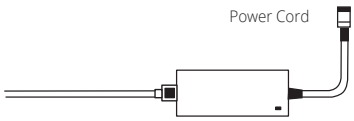
LT-84 ListenIR Transmitter/Radiator Combo

Package Contents

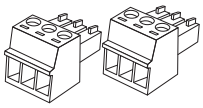
LT-84 ListenIR Transmitter/Radiator Combo
LA-210 12 VDC Universal Power Supply
Power Cord
LA-344 Mounting Hardware
(2) Phoenix Type Connectors
Quick Start Guide
LA-303 Small Room Signage Kit



LT-84 Stationary IR Transmitter/Radiator Combo



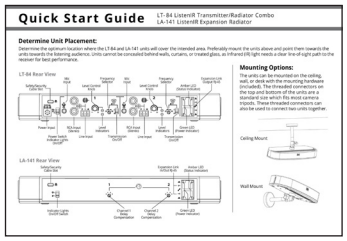
LA-210 12 VDC Universal Power Supply



(2) Phoenix Type Connectors

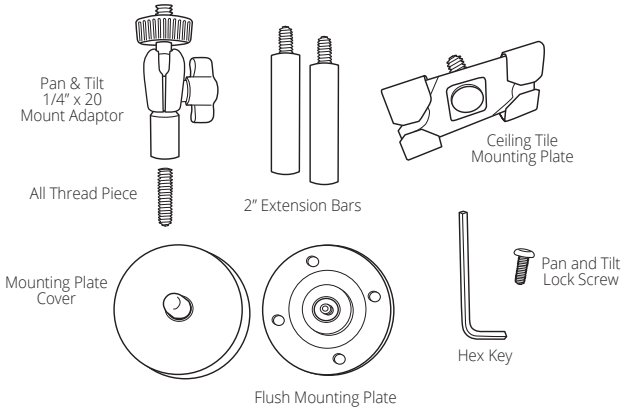
Hearing Assistance Available
Asistencia auditiva a su disposición
Aide à l'audition
This facility is equipped with a hearing assistance system.
Please ask for a receiver.
Este establecimiento está equipado con un sistema de asistencia auditiva. Por favor solicite un receptor.
Cet établissement est équipé d'un système d'aide à l'audition. S'il vous plait demandez un récepteur.
Listen

LA-303 Small Room Signage Kit

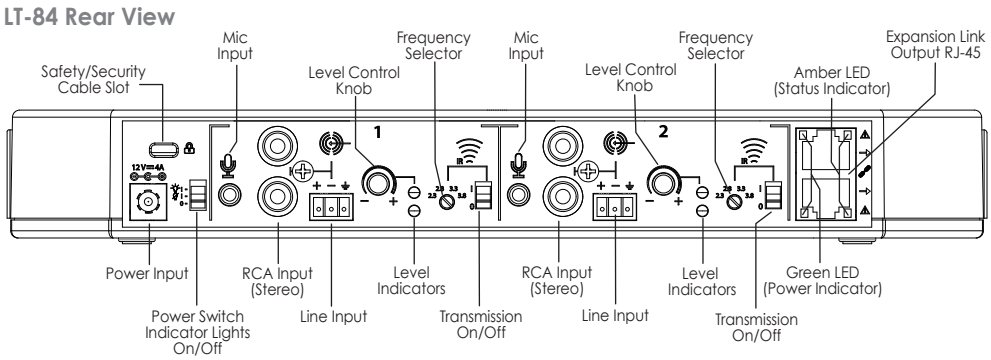


Quick Start Guide

LA-344 Mounting Hardware



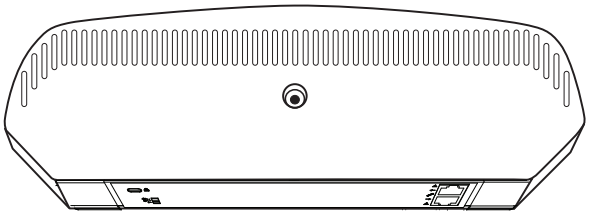
LT-84 Rear View Quick Reference



LA-141 ListenIR Expansion Radiator

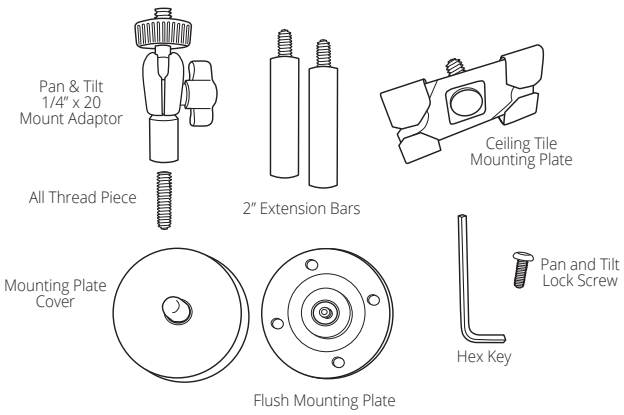
Package Contents

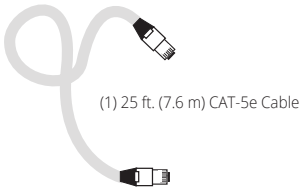
LA-141 ListenIR Expansion Radiator
(1) 25 ft. (7.6 m) CAT-5e Cable
LA-344 Mounting Hardware
Quick Start Guide



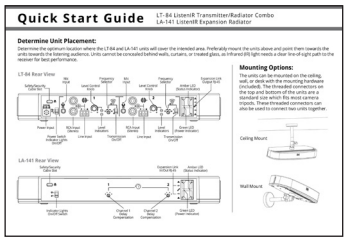
LA-141 Listen IR Transmitter/Radiator Combo

LA-344 Mounting Hardware





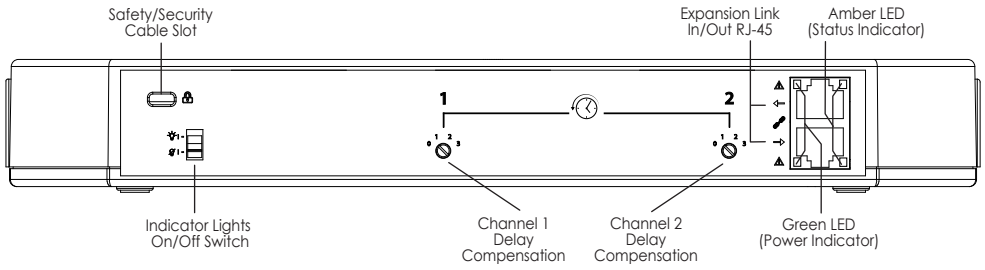
(1) 25 ft. (7.6 m) CAT-5e Cable



Quick Start Guide

LA-141 Rear View Quick Reference

LA-141 Rear View



LT-84 and LA-141 Coverage

The units emit a beam of infrared light from the front panel. Infrared light is not visible to the human eye. Below is a scaled diagram of the typical line-of-sight IR pattern or "footprint" emitted from the units. When using a unit in single channel transmit mode the coverage area is 7,500 ft² (697 m²) and in 2 channel transmit mode the coverage area is 3,750 ft² (348 m²). Use the diagrams below when evaluating a given space to determine the number of units required and placement of those units for best line-of-sight coverage with an LR-44 or LR-42 receiver.

Figure 1: LT-84 or LA-141 Single Unit Coverage Pattern "footprint" 1 & 2 Channel Transmission

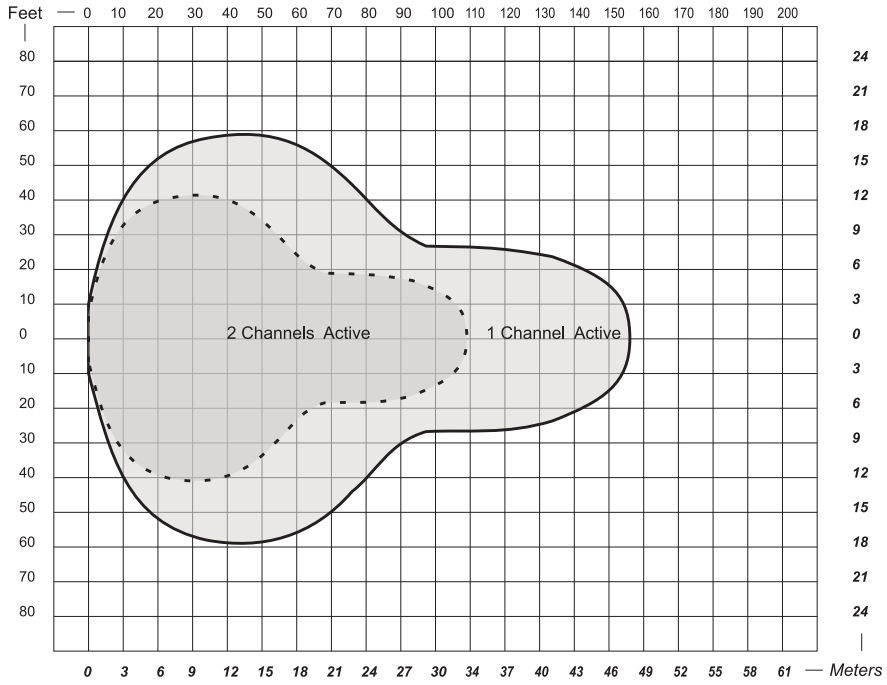


Figure 2: LT-84 and LA-141 Single Channel Coverage Pattern "footprint" from same emission point (40% increase)

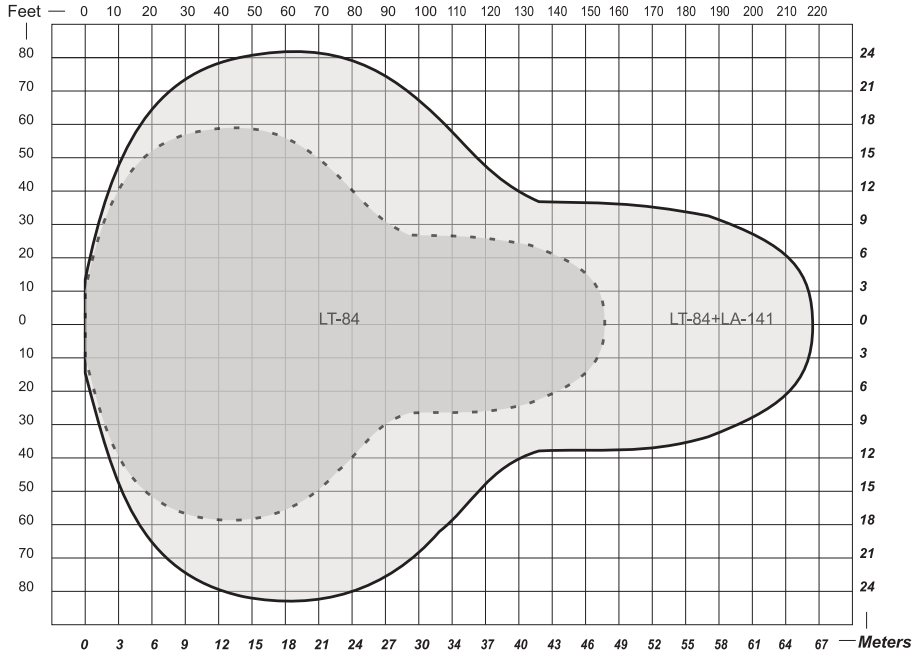


Figure 3: LT-84 and LA-141 Single Channel Coverage Pattern "footprint" Overlapping 50 ft. (15.24 m) apart

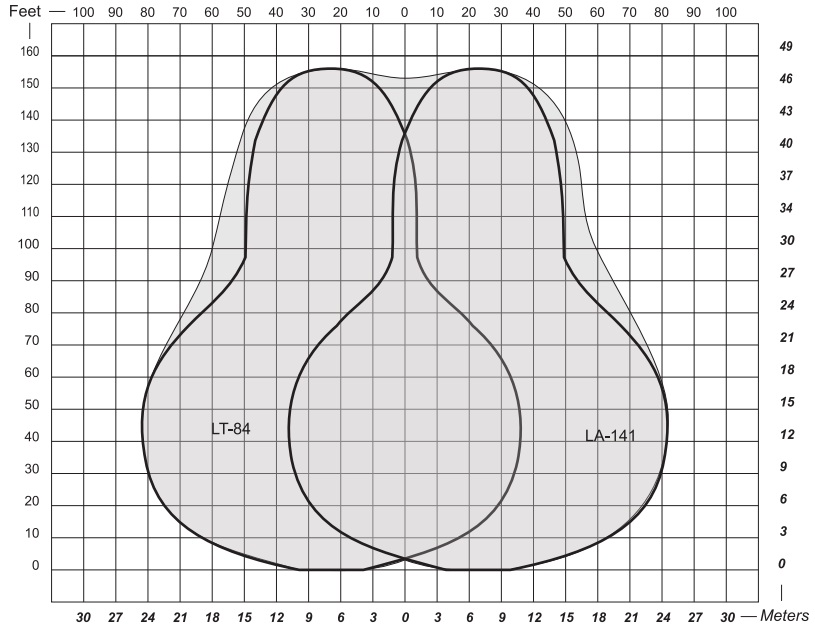


Figure 4: Single Channel Coverage Pattern "footprint" same emission point at an angle of 15 degrees off axis

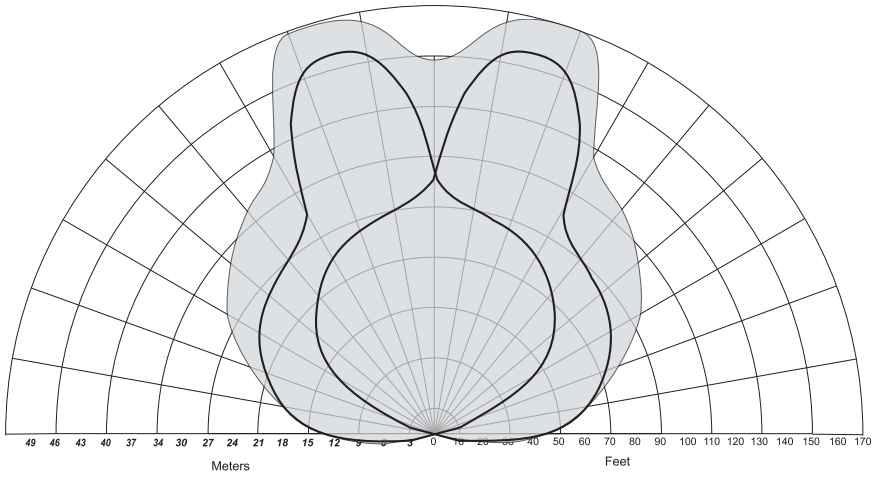
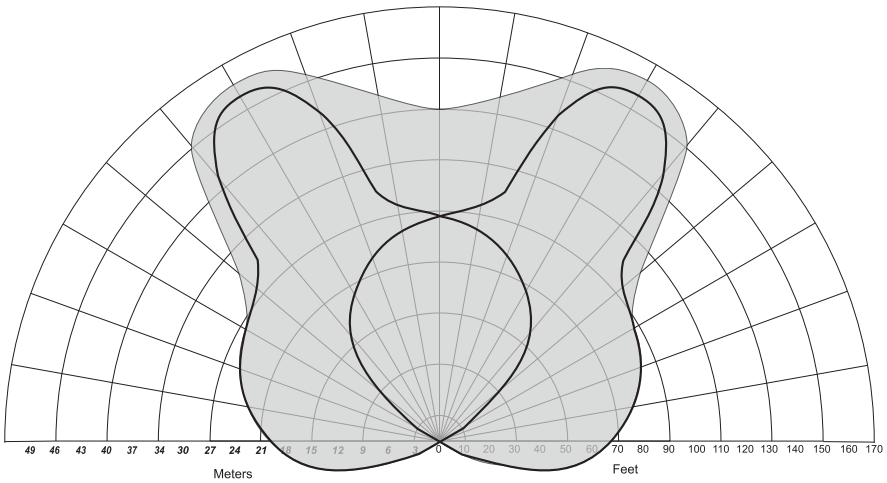


Figure 5: Single Channel Coverage Pattern "fooptrint" same emission point at an angle of 30 degrees off axis



Designing a System

Use the following steps when designing an IR system:

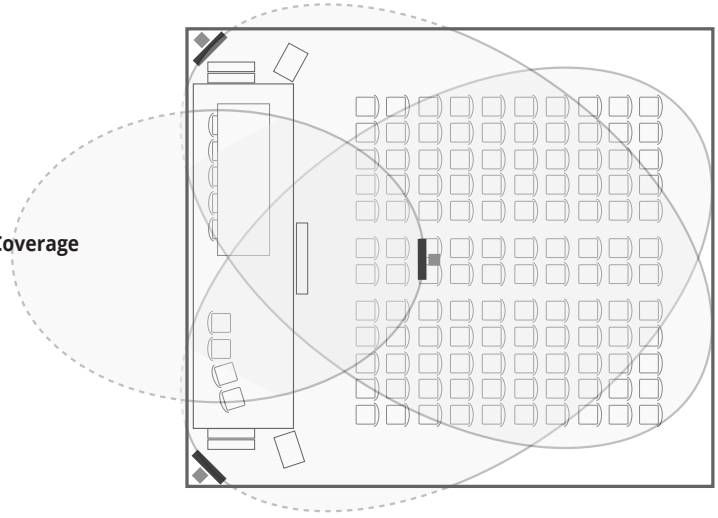
1. Determine the number of audio channels that will be used (1 or 2).
2. Determine the room size and shape.
3. Use the room size and shape information along with the appropriate 1 or 2 channel coverage pattern footprint to overlay the footprint on the room dimensions and determine the number of units required and the placement of those units to cover the desired listening audience.

Best performance is achieved:

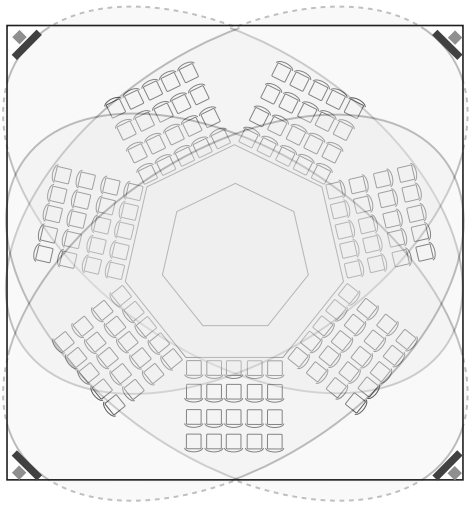
- When radiators face and have direct line-of-sight to audience.
- When a system provides over-lapping coverage (like a sprinkling system).
- When special coverage is provided for shaded areas like under a balcony.
- When mounted above and angled down into the listening audience 9 – 16 ft. (2.8 - 4.9 m) high and at an angle between 10 and 30 degrees.

Examples below are provided for design concept only and do not represent the actual LT-84 coverage pattern "footprint".

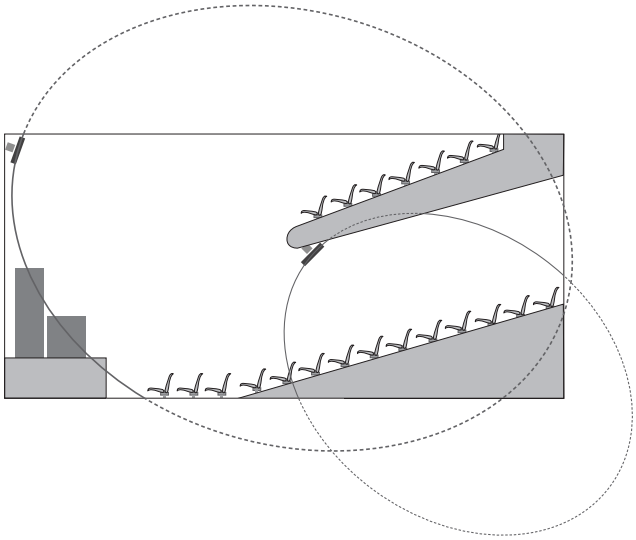
Direct Line-Of-Sight Coverage



Over-Lapping Coverage



Shaded Balcony Area

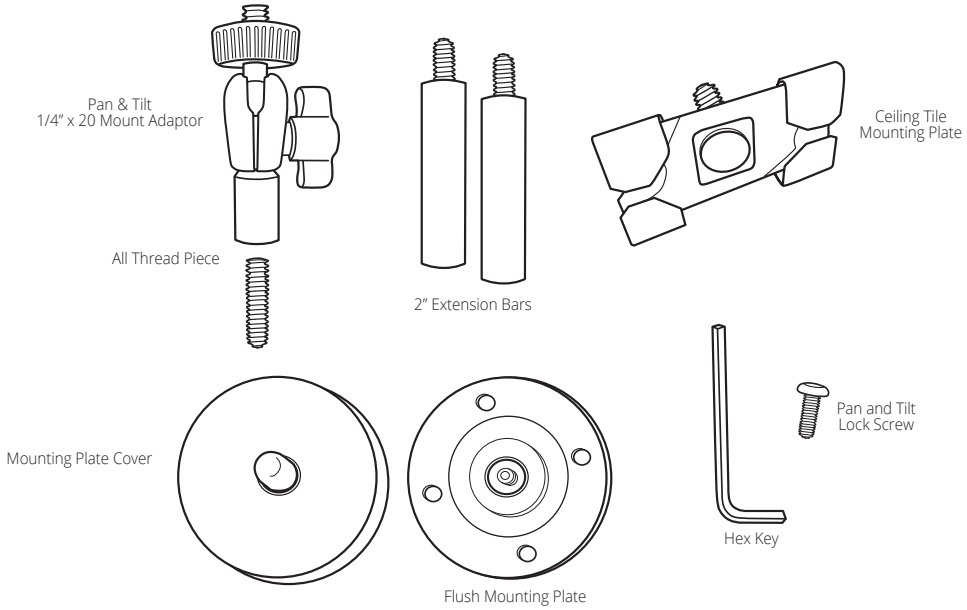


Flexible Mounting Hardware Instructions

LT-84 & LA-141 Universal Mounting Hardware Kit

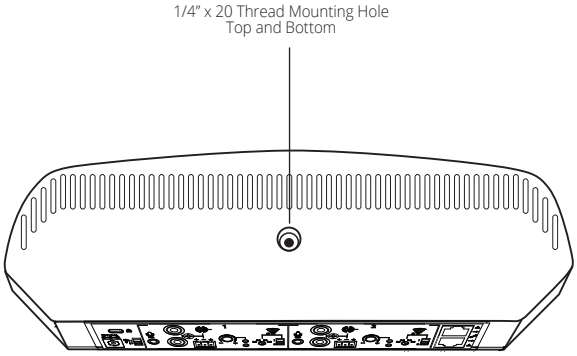
A universal mounting kit is supplied to simplify the mounting process for the LT-84 and LA-141. This kit contains the components for mounting to a flat surface wall or ceiling, attaching to a drop ceiling grid T bar or connecting units together. Please refer to the diagram below.

Mounting Hardware Pieces



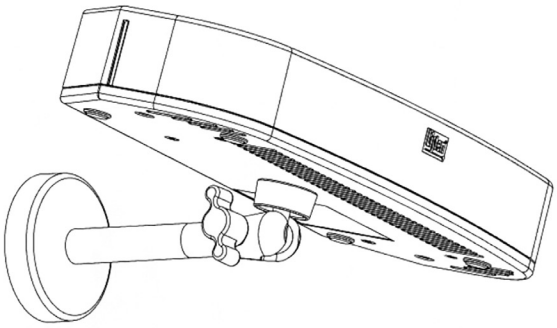
Threaded Mounting Socket ¼" x 20 (6mm x 1.0 thread)

The LT-84/LA-141 have a ¼" x 20 thread (6mm x 1.0 thread) hole located in the bottom and top of the enclosure. This threaded hole is used to attach the units to the provided universal mounting kit or to any user provided mounting device using a ¼" x 20 thread (6mm x 1.0 thread). Refer to the diagrams below of ceiling and wall mounting using the universal kit provided.



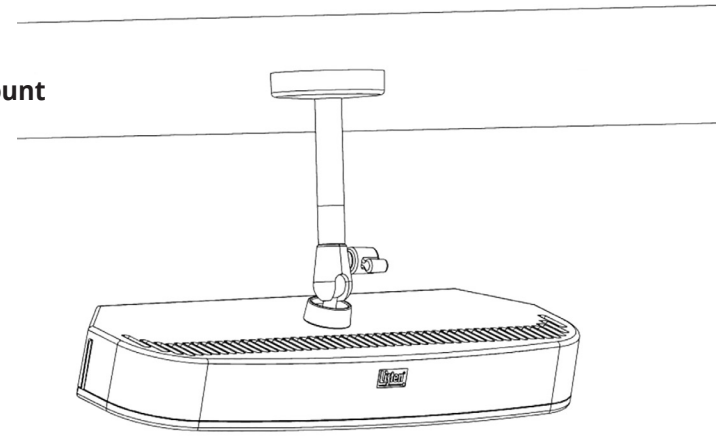
Wall Surface Mounting Example

Wall Mount



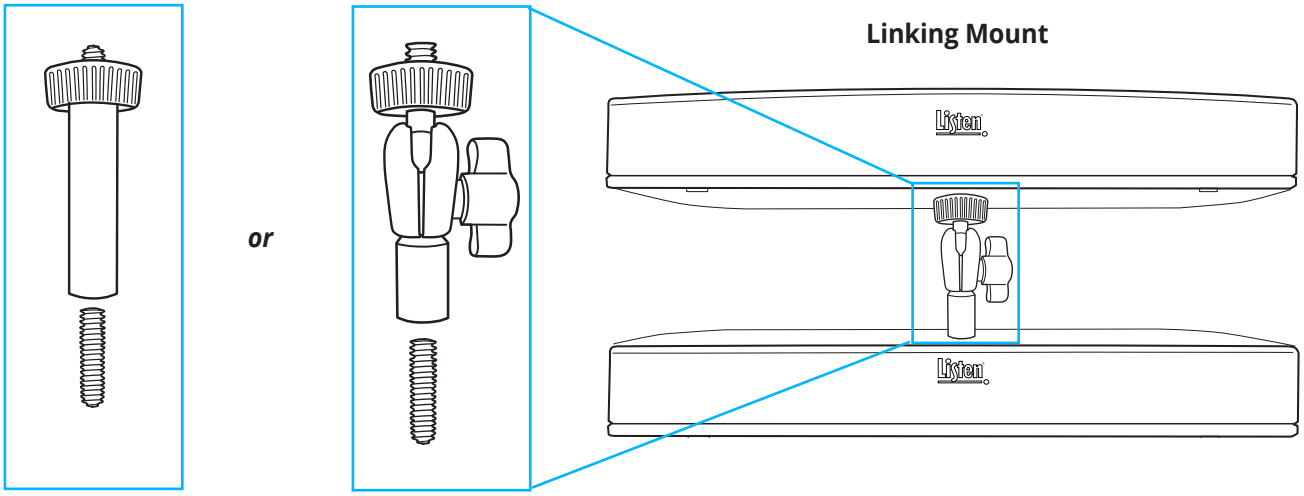
Ceiling Surface Mounting Example

Ceiling Mount



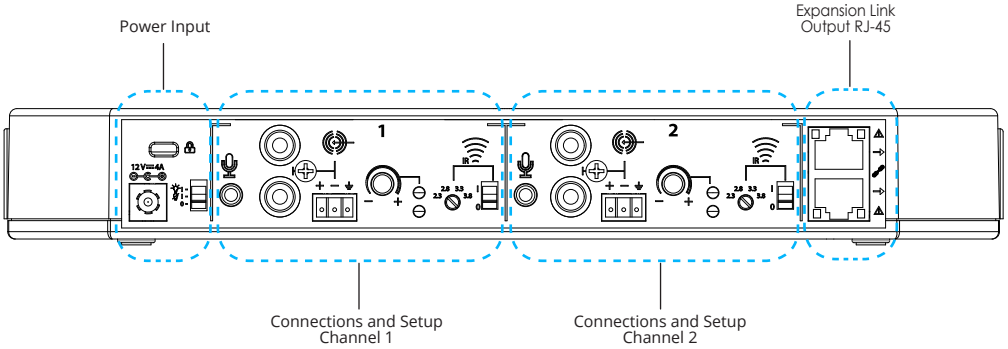
Solid ceiling surface or T bar grid mounting

Mounting Two Units with Linking Mount Example



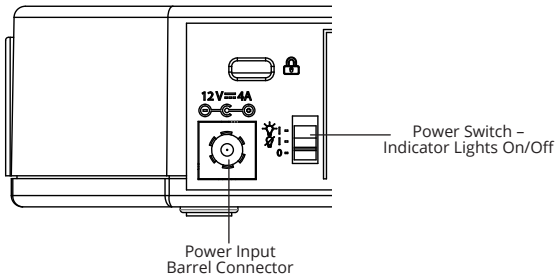
Interconnection and Control

The LT-84 is a two (2) channel I/R Transmitter/Radiator. Separate input and control sections are located on the rear panel of the LT-84 to accommodate the two (2) channel transmission. Refer to the diagram below for location of these two separate channel control areas, power input, and expansion link output RJ-45s.



Connection of the external power adaptor

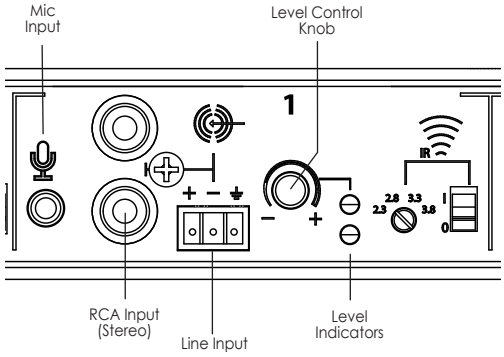
Power for the LT-84 is provided by a 12 VDC 4A universal switching power supply. The diagram below highlights the connection point for power and the associated power switch.



1. The supplied power adaptor is an in line universal switching power supply that can be used with an AC power source from 100 – 240 VAC, 50/60Hz. The overall length of the line cord and DC power cable is 10 ft. (3 m). Note that if the LT-84 is located further than 10 ft. (3 m) from the nearest AC outlet, provisions will need to be made for extending the power.
2. The Power Switch On/OFF control is a three (3) position switch located to the right of the power input connector.
    a. In the "top" position the unit is turned ON and the indicator lights are active.
    b. In the "middle" position the unit is turned ON and the indicator lights are **NOT** active.
    c. In the "bottom" position the LT-84 and LA-141 are OFF.

Connection of External Audio Sources

Each channel has the option for three (3) audio connections. The interconnection and control of each channel is identical. We will refer to the interconnection and control of channel 1 only. Refer to the diagram below for connection of audio sources.



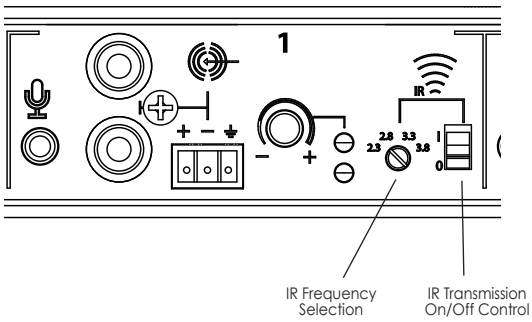
View of Channel 1 audio interconnections and control

1. The left side of the channel interconnection is a 3.5mm tip sleeve condenser microphone level input. This is a -30 dBu nominal microphone level input with a 5 VDC bias supply. Any of Listen's microphones may be connected to this input. Note that a 3.5mm extension cable will most likely be required when using the microphone input.
2. RCA unbalanced stereo audio input is provided through two phono connectors. These are a -10 dBu nominal level unbalanced input and the two inputs are summed together.
3. A balanced audio input is provided through the three (3) pin Phoenix type connector. This is a +4 dBu nominal level balanced input.
4. To the right of the balanced input is the audio input level adjustment control. This control rotates clockwise to increase the audio level, counter clockwise to decrease the audio level. From the factory this adjustment is set fully counter-clockwise.
5. A red and green LED located to the right of the level adjustment is used to determine the proper level adjustment. With a typical audio source connected adjust the audio level adjustment up or down until the green LED is solid green and the red LED flickers red occasionally with peaks in the audio.

   Note: LT-84 will enter Power Save Mode after 15 minutes of no audio. This state is indicated by the Green LED (Power indicator) on the expansion link output RJ-45 flashing slowly.

IR Frequency Selection/Control

The LT-84 provides the ability for the user to select the IR carrier frequency to be used for transmission of the audio connected to the channel input. The carrier frequencies are at 2.3MHz, 2.8MHz, 3.3MHz, and 3.8MHz. Refer to the diagram below for selection and control of the IR carrier.

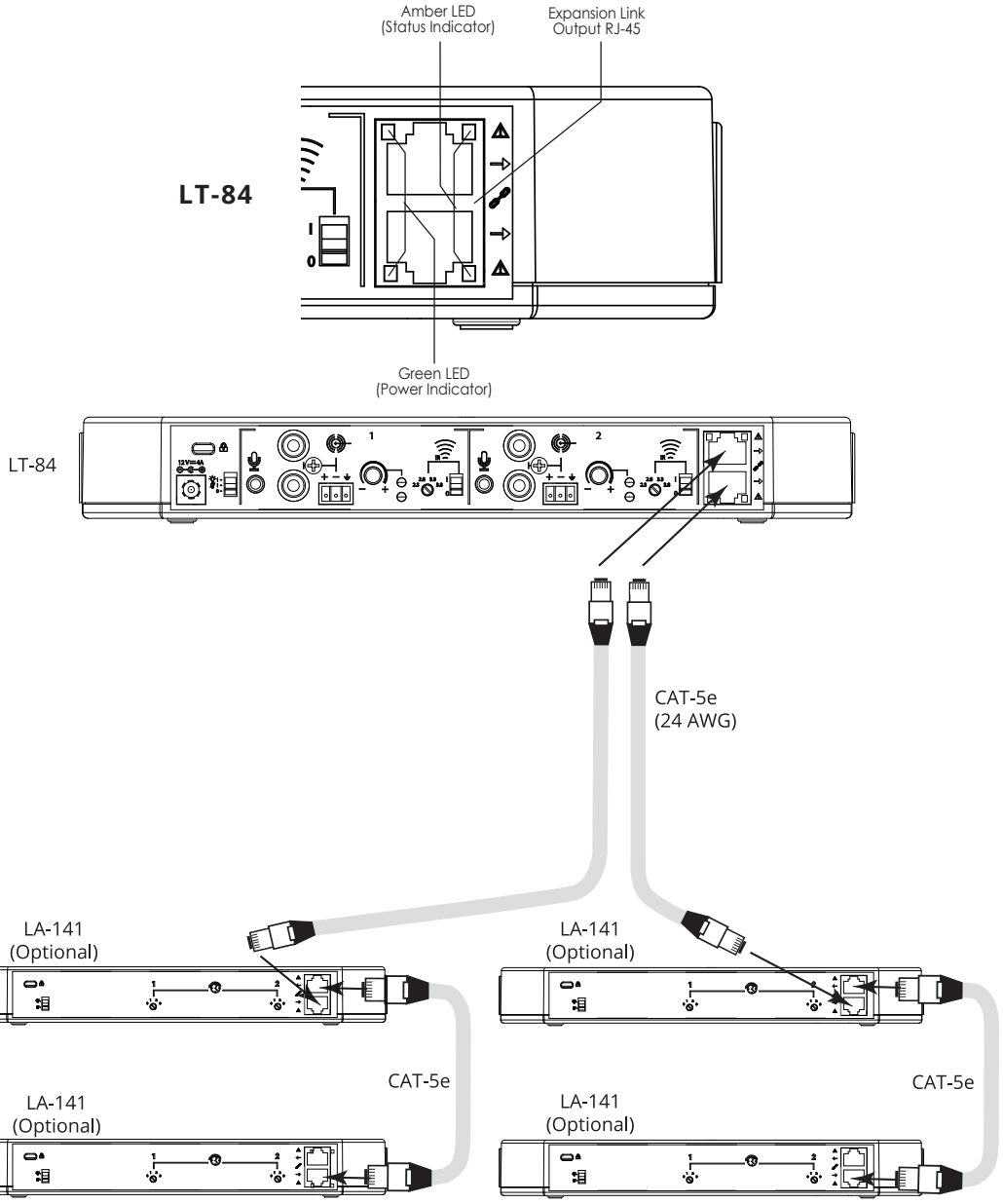


1. Located on the right side of the channel interconnection and control is the IR frequency selection. This is a four (4) position rotary selection switch. With the switch rotated to the counter clockwise stop, the IR frequency is set to 2.3MHz. Position 2 is 2.8MHz, position 3 is 3.3 MHz, and position 4 is 3.8MHz.
2. The IR Transmission On/Off switch is used to activate the IR signal transmission for this channel. In the "up" position the IR signal is active. In the "down" position the IR signal for this channel is **NOT** active.

Note: If both channels are active and set to the same frequency the LT-84 will indicate an error state and enter Power Save Mode. Power save mode is indicated by the Green Power Indicator LEDs flashing slowly. The error mode is indicated by 4 quick flashes on the Red Level Indicator LEDS and then turning off for 2 second, repeated until the error is resolved.

Listen IR Expansion Link RJ-45 Connections

The coverage area of the LT-84 can be extended by adding up to four (4) LA-141 Expansion Radiators. A maximum of two (2) LA-141s can be connected to each Expansion Link output RJ-45 on the LT-84 with a maximum daisy chained CAT-5e cable length of 100 ft. (30.5 m). **CAT-5e cable must be at least 24 AWG!** Refer to the diagram below.



Set Delay Compensation. For a single channel application, set both Channel 1 and 2 Delay Compensation switches to the same setting. For a two channel application, set Delay Compensation switches channel 1 and 2 independently. Pick appropriate frequency row then move over to the overall cable distance from the LT-84 to the LA-141 being set, this is the switch setting.

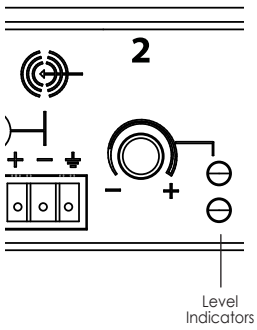
Delay Compensation Switch Setting

Cable Length	1 to 9 ft. 3 to 2.8 m	10 to 19 ft. 3 to 5.8 m	20 to 29 ft. 6 to 8.8 m	30 to 39 ft. 9.1 to 11.9 m	40 to 49 ft. 12.2 to 14.9 m
2.3 MHz	0	3	3	3	3
2.8 MHz	3	3	3	3	3
3.3 MHz	3	3	2	2	2
3.8 MHz	2	2	2	2	2

Cable Length	50 to 59 ft. 15.2 to 18 m	60 to 69 ft. 18.3 to 21 m	70 to 79 ft. 21.3 to 24 m	80 to 89 ft. 24.4 to 27.1 m	90 to 100 ft. 27.4 to 30.5 m
2.3 MHz	3	3	3	3	3
2.8 MHz	2	2	2	2	2
3.3 MHz	2	2	1	1	1
3.8 MHz	1	1	1	1	0

Indicator Lights

Input Level indicators Channel 1 and Channel 2:

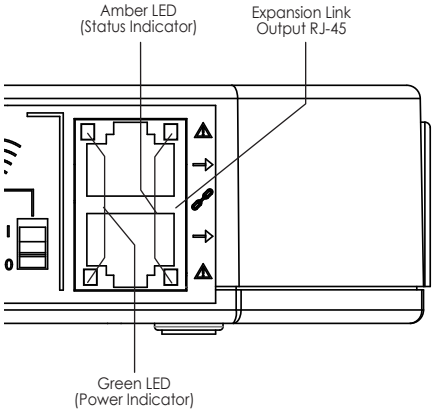


Green LED Off and Red LED Off – Low or no audio present, power switch is off or in the indicator lights off position

Green LED solid and Red LED flashing – Audio is present and adjusted properly on the input

Green LED Off and Red LED Ch1 and Ch2 flashing quickly 4 times with a 2 second off state, repeated – Frequency selectors are set to the same frequency and transmission switch is active on both channels (error state)

LT-84 RJ-45 Green and Amber LED Indicators:



Green LED OFF – Power switch is Off or in the indicator lights Off position, bad power supply or not connect to AC power outlet

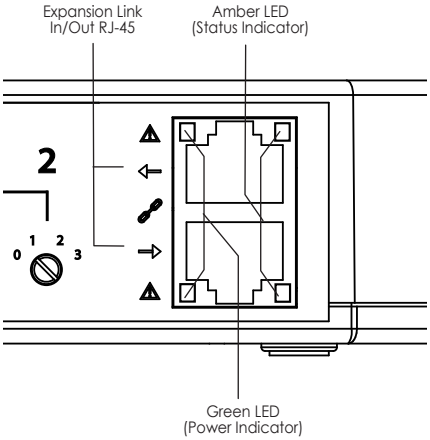
Green LED solid – Power is applied to the unit

Green LED flashing – Unit has entered Power Save Mode

Amber LED Off – No Carrier present or problem with IR LEDs

Amber LED solid – Carrier is present and unit is actively transmitting IR

LA-141 RJ-45 Green and Amber LED Indicators:



Green LED OFF – LT-84 power switch is Off, LT-84 has entered Power Save Mode, LA-141 indicator lights switch in Off position, bad CAT-5e cable or cable is too long

Green LED solid – Power is applied to the unit

Amber LED Off – No Carrier present, bad CAT-5e cable or cable is too long, problem with IR LEDs

Amber LED solid – Carrier is present and unit is actively transmitting IR

Troubleshooting

The LT-84 Green LED "Power Indicators" are not lit:

- Make sure the power supply is plugged into the LT-84 and plugged into an AC outlet.
- Make sure the electrical outlet is on or if using a power strip make sure it is turned on.
- Make sure the Power Switch is set to the Indicators Lights "On" position.
- Make sure the 12 VDC in-line switching power supply is lit green and that it is working.

The LT-84's Ch1 or Ch2 Audio "level Indicators" do not light:

- Make sure the LT-84 is plugged in.
- Make sure the Power Switch is set to the Indicators Lights "On" position.
- Make sure the audio source is active and that audio is presented to the audio input.
- Make sure the audio input is connected properly and that the level control knob is turned clockwise.

Receivers do not pick up audio:

- Make sure the LT-84 has not entered Power Save Mode due to no active audio for 15 minute.
- Make sure the audio source is playing and plugged into the LT-84 properly.
- Make sure the green level indicator is solid green and the red level indicator occasionally flashes red with audio peaks.
- Make sure the receivers are operating on the same channel / frequency as the LT-84.
- Make sure the LT-84 is transmitting IR light and that the IR light is not being blocked by objects.
- If some of the receivers work but others do not, check the battery and/or earphones.

Receiver's audio is weak and noisy:

- Make sure the green level indicator is solid green and the red level indicator occasionally flashes red with audio peaks.
- Make sure LA-141s are connected properly and that the power and status indicator LEDs are lit solid.
- Make sure the LT-84 and LA-141's IR light is focus towards the listening audience.
- Make sure the receiver is directed towards the LT-84 and LA-141s.
- Make sure that all units are transmitting IR light and that the IR light is not being blocked by objects.
- Add more LA-141s to increase the overall coverage.

LT-84 Specifications

LT-84 Stationary IR Transmitter/Radiator Combo		
Power	Power Supply Type	In-line switching supply, Listen part number LA-210
	Power Supply Input	100-240 VAC, 50-60 Hz
	Power Supply Output	12 VDC, 4A, 48W, center positive, 2.5 mm ID barrel connector
	Power Line Cord	IEC line cord, North America Type B (LT-84-01), Asia and UK Type G (LT-84-02), Euro Type C (LT-84-03), Australia Type I (LT-84-04)
RF	Carrier Frequencies	2.3 MHz, 2.8 MHz, 3.3 MHz, 3.8 MHz, selectable
	Number of Channels	Two (2) Channels
	Modulation	FM Wideband, ±50kHz deviation max, 50 µS pre-emphasis
	Expansion Link Output	Two (2) RJ-45 connectors, CAT-5e cable 24 AWG, 100 ft. (30 m) maximum cable length, two (2) LA-141s per output connector
	Power Save Mode	Shuts off carrier when no audio is present for 15 minutes
IR	IR Emitter Power	1.49 W
	Coverage Area	7,500 ft^2 (697 m^2) single channel when used with Listen Receivers
Controls	Power Switch - Indicator Lights On/Off	Three (3) position switch - Power OFF, Power ON-Indicator Lights OFF, Power ON-Indicator Lights ON
	Level Control Knob	Audio taper rotary potentiometer, counter-clockwise decreases input mix level, clockwise increases input mix level
	Frequency Selector	Four (4) position rotary switch (2.3 MHz, 2.8 MHz, 3.3 MHz, 3.8 MHz)
	Transmission ON/OFF	Two (2) position switch (transmission OFF, transmission ON)
Indicators	Power Supply LED	Green LED on in-line power supply indicates AC power is applied
	Audio Level Indicators	Green LED indicates Audio presence and Red LED indicates peaks in the audio
	Green LEDs - Power Indicator RJ-45	Solid Green indicates power is applied to unit, flashing indicates unit has entered power save mode
	Amber LEDs - Status Indicator RJ-45	Solid Amber indicates carrier is present and IR is being transmitted
Audio	Microphone Input	3.5 mm (0.14in.) Tip/Sleeve connector, -30 dBu nominal input, +14 dB headroom, impedance 4.4k Ohms, 5 VDC bias supply
	Line Input	Stereo/Mono Input. Two (2) RCA Phono connectors, unbalanced, -10 dBu nominal input, +14 dB headroom, impedance 10k
	Line Input	Mono Input. Phoenix Type connector, balanced, + 4 dBu nominal input, +14 dB headroom, impedance 100k
	Frequency Response	20 Hz - 20 kHz (+/- 1 dB) Line Input 63 Hz - 15 kHz (+/- 3 dB) System Specification (wireless end-to-end with LR-44)
	Total Harmonic Distortion	<0.1% (THD) Line Input <2% (THD) System Specification (wireless end-to-end with LR-44)
	Signal-to-Noise Ratio	>70 dB (SNR) Line Input >60 dB (SNR) System Specification (wireless end-to-end with LR-44)
Physical	Color	Black
	Dimensions (H x W xD)	1.5 x 10.7 x 4.1 in. (3.81 x 27.2 x 10.5 cm)
	Weight	0.8 lbs. (0.4 kg)
	Unit Weight with Power Supply	1.8 lbs. (0.8 kg)
	Shipping Weight	3.4 lbs. (1.54 kg)
Environmental	Temperature - Operation	14 °F (-10 °C) to +104 °F (40 °C)
	Temperature - Storage	-4 °F (-20 °C) to +122 °F (50 °C)
	Relative Humidity	0 to 95% relative humidity, non-condensing
Compliance	Standards	FCC part 15, ICS-03, CE, UL, CUL, C-Tick, CCC, PSE, KC, GS, RoHS, WEEE

LA-141 Specifications

LA-141 Listen IR Expansion Radiator		
Power	Power Supply	12 VDC, provided via LT-84 Expansion Link Output RJ-45s
	Current Draw	600 mA per LA-141, maximum of two (2) LA-141s daisy chained with CAT-5e cable 24 AWG 100 ft. (30 m) to each LT-84 Expansion Link Output
RF	Carrier Frequencies	2.3 MHz, 2.8 MHz, 3.3 MHz, 3.8 MHz
	Number of Channels	Two (2) Channels
	Modulation	FM Wideband, ±50kHz deviation max, 50 µS pre-emphasis
	Expansion Link In/Out	Two (2) RJ-45 connectors, CAT-5e cable 24 AWG, 100 ft. (30 m) maximum cable length, two (2) LA-141s per daisy chain (total daisy chain cannot be extend beyond two expansion radiators)
	Power Save Mode	Shuts off carrier when no audio is present for 15 minutes
IR	IR Emitter Power	1.49 W
	Coverage Area	7,500 ft^2 (697 m^2) single channel when used with Listen Receivers
Controls	Indicator Lights On/Off Switch	Two (2) position switch - Indicator Lights OFF, Indicator Lights ON
	Delay Compensation	Four (4) position rotary switch setting (0, 1, 2, 3)
Indicators	Green LEDs - Power Indicator RJ-45	Solid Green indicates power is applied to unit
	Amber LEDs - Status Indicator RJ-45	Solid Amber indicates carrier is present and IR is being transmitted
Physical	Color	Black
	Dimensions (H x W xD)	1.5 x 10.7 x 3.9 in. (3.81 x 27.2 x 10.5 cm)
	Weight	0.6 lbs. (0.28 kg)
	Shipping Weight	3.0 lbs. (1.4 kg)
Environmental	Temperature - Operation	14 °F (-10 °C) to +104 °F (40 °C)
	Temperature - Storage	-4 °F (-20 °C) to +122 °F (50 °C)
	Relative Humidity	0 to 95% relative humidity, non-condensing
Compliance	Standards	FCC part 15, ICS-03, CE, UL, CUL, C-Tick, CCC, PSE, KC, GS, RoHS, WEEE

Warranty Information

Listen Technologies Corporation (Listen) warrants its transmitters and receivers (LT-82, LT-700, LT-800, LT-803, LR-100, LR-42, LR-44, LR-200, LR-300, LR-400, LR-500, LR-4200, LR-5200) to be free from defects in workmanship and material under normal use and conditions for the useful lifetime of the product from date of purchase.

Listen warrants it's Listen IR Radiators (LA-140, LT-84, LA-141) to be free from defects in workmanship and material under normal use and conditions for three years from the date of purchase.

Listen warrants its Digital IR products (T8, T16, RAD25, R8, R32) to be free from defects in workmanship and material under normal use and conditions for two years from the date of purchase.

Listen warrants its Noise Canceling Microphone (LA-270) to be free from defects in workmanship and material under normal use and conditions for one year from date of purchase.

Listen warrants it's Charging/Carrying Cases (LA-306, LA-311, LA-313, LA-317, LA-318, LA-319, LA-320, LA-321, LA-322, LA-323, LA-324, LA-325, LA-380, LA-381) to be free from defects in workmanship and material under normal use and conditions for one year from date of purchase.

All other products and accessories are warranted for 90 days from date of purchase.

This warranty is only available to the original end purchaser of the product and cannot be transferred.

Warranty is only valid if warranty card has been returned within 90 days of purchase. This warranty is void if damage occurred because of misuse or if the product has been repaired or modified by anyone other than a factory authorized service technician. Warranty does not cover normal wear and tear on the product or any other physical damage unless the damage was the result of a manufacturing defect. Listen is not liable for consequential damages due to any failure of equipment to perform as intended.

Listen shall bear no responsibility or obligation with respect to the manner of use of any equipment sold by it. Listen specifically disclaims and negates any warranty of merchantability or fitness of use of such equipment including, without limitation, any warranty that the use of such equipment for any purpose will comply with applicable laws and regulations. The terms of the warranty are governed by the laws of the state of Utah.

In the first ninety days after purchase, any defective product will be replaced with a new unit. After ninety days, Listen will at its own discretion either repair or replace transmitters and receivers with a new unit or a unit of similar type and condition. Product that is not covered under warranty shall be repaired or replaced with a unit of similar type and condition based on a flat fee. Contact Listen for details.

This limited warranty, prices, and the specifications of products are subject to change without notice.

Technical Support Contact

If technical service is needed, please contact Listen. Pre-authorization is required before returning Listen products. If products were damaged in shipment, please contact the carrier, then contact Listen for replacement or repair requirements payable by the carrier.

Listen's corporate headquarters are located in Bluffdale, Utah U.S.A. and are open Monday through Friday, 8am to 5pm Mountain Time.

LISTEN TECHNOLOGIES
14912 Heritage Crest Way
Bluffdale, Utah 84065-4818
+1.801.233.8992
+1.800.330.0891 North America
+1.801.233.8995 Fax
support@listentech.com
www.listentech.com

NOTES:

14912 Heritage Crest Way
Bluffdale, Utah 84065-4818
+1.801.233.8992
+1.800.330.0891 North America
+1.801.233.8995 Fax
support@listentech.com
www.listentech.com

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